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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/283,561
Filing Date: April 01, 1999
Appellant(s): CHALLENGER ET AL.

Nathaniel T. Wallace
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 04/11/2006 appealing from the Office action
mailed 01/27/2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6199082

FERREL

03-2001

Cormen et al., "Introduction To Algorithms," copyright 1990, pages 447-493.

Darnell, Rick et al., "Using Macromedia Dreamweaver 1.2," Que Publishing (June 1998).

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16, 17, 42 and 43 remain rejected under 35 U.S.C. 102(e) as being anticipated by Darnell, et al., Using Macromedia Dreamweaver 1.2 (Que Publishing – June, 1998).

Claim 16:

Darnell discloses a method for publishing a plurality of objects (see Chapter 8 – “Reusable Parts for Web Pages” – Darnell discloses this limitation in that Dreamweaver is a web authoring tool that allows a user to publish web pages, as clearly indicated in the cited text), comprising the steps of:

- providing a plurality of objects (see Pages 117-123 – Darnell discloses this limitation in that Dreamweaver allows a user to create and manage a website having a plurality of web pages; each individual web page of the website is an “object”), including compound objects (see Pages 117-123 – Darnell discloses this limitation in that Dreamweaver includes web pages that are “compound objects” because multiple “parts” comprise the web pages, as clearly indicated in the cited text);
- partitioning at least some of the plurality of objects into a plurality of groups such that if two compound objects are constructed from at least one common changed fragment, then the compound objects are placed in a same group (see Pages 117-123 – Dreamweaver includes “web page parts” in a “library,” as clearly indicated in the cited text. These “library items” are used in construction of web pages for a website and may be edited, as clearly indicated in the cited text. These edited “library items” are the “changed fragments.” Dreamweaver allows the user to edit multiple “library items” and update all web pages at once, as clearly indicated in the cited text. In this “atomic” update of the web pages, Dreamweaver searches through all of the web pages for the website and updates

all of those pages containing the edited "library items," as clearly indicated in the cited text. In order to do this, Dreamweaver must *inherently* "place compound objects having a common changed fragment into a same group" in that, for each edited "library item," Dreamweaver will determine which web pages of the website contain said edited "library item." In doing this, Dreamweaver has "[partitioned] at least some of the plurality of objects into a plurality of groups such that if two compound objects are constructed from at least one common changed fragment, then the compound objects are placed in a same group."); and

- publishing all objects belonging to a same group together (see Pages 117-123 – Darnell discloses this limitation in that Dreamweaver allows users to collaboratively work on the content of web pages for a website and allows said users to publish their website, as clearly indicated in the cited text. In doing this, Dreamweaver sets up a "working site" and a "final site." After all final edits to the "library items" and each individual web page have been made, the website is sent to the web server. Thus, Darnell discloses "publishing all objects belonging to a same group together.").

Claim 17:

Darnell discloses the method of Claim 16, wherein the step of publishing includes the step of:

- for at least two of the plurality of groups, publishing all objects belonging to a first group before publishing any objects belonging to a second group (see Pages 117-123 – Darnell discloses this limitation in that, as indicated in the above rejection for Claim 16, Dreamweaver divides the website into groups that include web pages having the same edited “library item,” makes the required changes to said web pages, and then publishes said web pages. Because Dreamweaver can handle each edited “library item” separately, web pages that contain a first edited “library item” may be “published” before web pages containing a second edited “library item.” Thus, Darnell discloses “publishing all objects belonging to a first group before publishing any objects belonging to a second group.”).

Claims 42 and 43:

Claims 42 and 43 are merely computer software that performs the methods of Claims 16 and 17, respectively. Accordingly, Claims 42 and 43 are rejected using the same rationale indicated in the above rejections for Claims 16 and 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 19, 44 and 45 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Darnell, et al., Using Macromedia Dreamweaver 1.2 (Que Publishing – June, 1998).

Claims 18, 19, 44 and 45:

As indicated in the above discussion, Darnell discloses every element of Claim 16. Darnell also discloses "delaying publication of a first object until a second object is published" (see Pages 117-123 – Darnell discloses this limitation in that, as indicated in the above rejection for Claim 16, Dreamweaver divides the website into groups that include web pages having the same edited "library item," makes the required changes to said web pages, and then publishes said web pages. Because Dreamweaver can handle each edited "library item" separately, publication of web pages that contain a first edited "library item" may be "delayed" until web pages containing a second edited "library item" are published. Thus, Darnell discloses "delaying publication of a first object until a second object is published."). Finally, Darnell discloses first and second objects that are web pages.

Darnell fails to expressly disclose delaying publication of a first object until a second object *which is referenced by the first object, via a hyperlink*, is published.

However, it was well-known by one of ordinary skill in the art at the time the invention was made to publish web pages in a certain order so that the first web page would not include a hyperlink to the second web page before the content on the second web page was updated. Webmasters did this so that all web pages for a website correspond and include the latest version of all components that comprise the web pages.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, disclosed in Darnell, to include the step of delaying publication of a first object until a second object which is referenced by the first object, via a hyperlink, is published so that the first web page would not include a hyperlink to the second web page before its content was updated.

Claims 20-22 and 46-48 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Darnell, et al., Using Macromedia Dreamweaver 1.2 (Que Publishing – June, 1998), in view of Ferrel et al., U.S. Patent No. 6,199,082.

Claim 20:

As indicated in the above discussion, Darnell discloses every element of Claim 16.

Darnell fails to expressly disclose:

- representing at least some of the plurality of objects by nodes on at least one graph; and
- representing one or more relationships between the objects by connections between the nodes.

Ferrel teaches a method for publishing a plurality of objects (see Column 1, Lines 8-11), comprising the steps of:

- representing at least some of the plurality of objects by nodes on at least one graph (see Column 9, Lines 30-31 – Ferrel discloses this limitation in that the reference states that an acyclic graph is a way of “storing related and ordered objects in a data structure.” An acyclic graph **inherently** includes “nodes on a graph” in that this wording simply describes an “acyclic graph.”); and
- representing relationships between the objects by edges between the nodes (see Column 9, Lines 30-31 – Ferrel discloses this limitation in that the reference

states that an acyclic graph is a way of "storing related and ordered objects in a data structure." An acyclic graph **inherently** includes "edges between the nodes" that "represent relationships between the objects" in that this wording simply describes an "acyclic graph."), for the purposes of organizing the relationships between the objects and graphically displaying those relationships.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, disclosed in Darnell, to include the steps of representing objects by nodes on at least one graph and representing relationships between the objects by edges between the nodes for the purposes of organizing the relationships between the objects and graphically displaying those relationships, as taught in Ferrel.

Claim 21:

Darnell, in view of Ferrel, fails to expressly disclose a graph that includes an edge between two nodes representing compound objects if the two compound objects are constructed from at least one common changed fragment. However, this limitation is merely reciting an **inherent** characteristic of an acyclic directed graph. As indicated in the above rejection for Claim 20, Ferrel teaches an acyclic graph that represents relationships between objects by edges between nodes. Any directed

acyclic graph that includes two nodes representing two compound objects constructed from a common fragment will *inherently* have an edge between the two nodes.

Claim 22:

Darnell, in view of Ferrel, fails to expressly disclose edges that include a directed edge from a first node representing a first object to a second node representing a second object, if the second object includes a reference to the first object. However, this limitation is merely reciting an *inherent* characteristic of an acyclic directed graph.

As indicated in the above rejection for Claim 20, Ferrel teaches an acyclic graph that represents relationships between objects by edges between nodes. Any directed acyclic graph that includes a second object comprising a reference to a first object will *inherently* have a directed edge from a first node representing the first object to a second node representing the second object because acyclic graphs display the relationships between nodes using directed edges.

Claims 46-48:

Claims 46-48 are merely computer software that performs the methods of Claims 20-22, respectively. Accordingly, Claims 46-48 are rejected using the same rationale indicated in the above rejections for Claims 20-22.

Claims 23-26, 49-53 and 55-60 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Darnell, et al., Using Macromedia Dreamweaver 1.2 (Que Publishing – June, 1998), in view of Ferrel et al., U.S. Patent No. 6,199,082, and further in view of Cormen et al., “Introduction to Algorithms” ©1990, pp. 477-493.

Claim 23:

As indicated in the above discussion, Darnell, in view of Ferrel, discloses/teaches every element of Claim 20.

Darnell, in view of Ferrel, fails to disclose determining if a first compound object and a second compound object embed at least one common changed fragment by:

- topologically sorting at least part of the at least one graph;
- examining the at least one graph in an order defined by the topological sort; and
- when a node n1 is examined, for a node n2 which has changed and for which an edge from node n2 to n1 exists, constructing a union between a set including node n2 and a set including changed fragments used to construct node n2.

Cormen teaches determining if a first compound object and a second compound object embed at least one common changed fragment by:

- topologically sorting at least part of the at least one graph (see Page 485, fifth and sixth full paragraphs);

- examining the at least one graph in an order defined by the topological sort (see Page 485, fifth and sixth full paragraphs); and
- when a node n1 is examined, for a node n2 which has changed and for which an edge from node n2 to n1 exists, constructing a union between a set including node n2 and a set including changed fragments use to construct node n2,

for the purpose of indicating precedence among the objects (see Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, disclosed in Darnell, in view of Ferrel, to include the steps of:

- topologically sorting at least part of a graph including dependence edges between objects;
- examining the graph in an order defined by the topological sort; and
- constructing a union between a set including a second object and a set including changed fragments needed to construct the second object for at least one edge which begins with the second object and terminates in the first object and for which the second object has changed,

for the purpose of indicating precedence among the objects, as taught in Cormen.

Claim 24:

Darnell, in view of Ferrel, fails to disclose performing a topological sort on at least part of the at least one graph for finding strongly connected components.

Cormen teaches a method of performing a topological sort of an acyclic graph, comprising the step of:

- performing a topological sort on at least part of the at least one graph for finding strongly connected components (Pages 488-493),

for the purpose of converting a directed graph into an acyclic component graph (see Figure 23.9 on Page 489) so as to indicate precedence among the objects that comprise nodes of the graph (Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, disclosed in Darnell, in view of Ferrel, to include the step of performing a topological sort on at least part of the at least one graph for finding strongly connected components for the purpose of indicating precedence among the objects that comprise nodes of the graph, as taught in Cormen.

Claim 25:

Darnell, in view of Ferrel, discloses a method for publishing a plurality of objects, further comprising the step of:

- publishing a set of objects of the at least one graph together (as explained in the rejection for Claim 16, the objects are partitioned into groups and then published together).

Darnell, in view of Ferrel, fails to expressly disclose a method for publishing a plurality of objects, comprising the step of:

- publishing a set of objects **belonging to a same strongly connected component** together.

Cormen teaches a method of performing a topological sort of an acyclic graph, comprising the step of:

- examining objects in an order defined by topological sorting (see Page 485, fifth and sixth full paragraphs); and
- finding at least one strongly connected component in the at least one graph (see Pages 488-493),

for the purpose of converting a directed graph into an acyclic component graph (see Figure 23.9 on Page 489) so as to indicate precedence among the objects that comprise nodes of the graph (see Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for publishing objects, disclosed in Darnell, in view of Ferrel, to include the step of:

- publishing a set of objects belonging to a same strongly connected component of the at least one graph together,

for the purpose of converting a directed graph into an acyclic component graph so as to indicate precedence among the objects that comprise nodes of the graph, as taught by Cormen.

Claim 26:

Darnell, in view of Ferrel, discloses a method for publishing a plurality of objects, comprising the steps of:

- examining objects in an order (in Darnell, the objects are “examined in an order” in that they are partitioned into groups, as discussed in the above rejection for Claim 16); and
- when an unpublished object is examined, publishing the unpublished object together with all objects (in Darnell, all the web pages can be updated at the same time; thus, “when an unpublished object is examined,” it is published together with all objects).

Darnell, in view of Ferrel, fails to expressly disclose a method for publishing a plurality of objects, comprising the step of:

- examining objects in an order **defined by the topological sort**; and
- when an unpublished object is examined, publishing the unpublished object together with all objects **belonging to a same strongly connected component**.

Cormen teaches a method of performing a topological sort of an acyclic graph, comprising the step of:

- examining objects in an order defined by topological sorting (see Page 485, fifth and sixth full paragraphs); and
- finding at least one strongly connected component in the at least one graph (see Pages 488-493),

for the purpose of converting a directed graph into an acyclic component graph (see Figure 23.9 on Page 489) so as to indicate precedence among the objects that comprise nodes of the graph (see Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for publishing objects, disclosed in Darnell, in view of Ferrel, to include the steps of:

- examining objects in an order defined by the topological sort; and
- when an unpublished object is examined, publishing the unpublished object

together with all objects belonging to a same strongly connected component, for the purpose of converting a directed graph into an acyclic component graph so as to indicate precedence among the objects that comprise nodes of the graph, as taught by Cormen.

Claims 49-52:

Claims 49-52 are merely computer software that performs the methods of Claims 23-26, respectively. Accordingly, Claims 49-52 are rejected using the same rationale indicated in the above rejections for Claims 23-26.

Claim 53:

Darnell discloses a method for publishing a plurality of objects (see Chapter 8 – “Reusable Parts for Web Pages”), comprising the steps of:

- providing a plurality of objects (as indicated in the above rejection for Claim 1, Darnell discloses this limitation); and
- publishing a set of objects (see Pages 117-123 – Darnell discloses this limitation in that Dreamweaver allows users to publish a website comprising web pages, as clearly indicated in the cited text).

Darnell fails to expressly disclose:

- constructing at least one graph, the at least one graph including nodes representing objects in the plurality of objects and edges for connecting nodes

having relationships, at least some of the edges being derived from at least one consistency restraint.

Ferrel teaches:

- constructing at least one graph (see Column 9, Lines 30-31 – Ferrel discloses this limitation in that the reference states that an acyclic graph is a way of “storing related and ordered objects in a data structure”), the at least one graph including nodes representing objects in the plurality of objects and edges for connecting nodes having relationships (Ferrel expressly discloses an acyclic graph, which **inherently** includes “nodes” representing objects and “edges” for connecting “nodes having relationships” in that this wording simply is a **definition** of “acyclic graph”), at least some of the edges being derived from at least one consistency restraint (**the examiner’s interpretation of “consistency constraint”** → any relationship or order that is imposed upon objects of web pages that will affect the publication of said web pages; see Column 9, Lines 30-31 – Ferrel discloses this limitation in that the reference states that the objects in the acyclic graph are “related” and “ordered;” moreover, “edges” of an “acyclic graph” **inherently** are derived from a “consistency constraint” in that, when a graph is topologically sorted, the “topological sort” follows the edges and imposes “consistency constraints”), for the purposes of organizing the relationships between the objects and graphically displaying those relationships.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, disclosed in Darnell, to include the step of:

- constructing at least one graph, the at least one graph including nodes representing objects in the plurality of objects and edges for connecting nodes having relationships, at least some of the edges being derived from at least one consistency restraint, for the purposes of organizing the relationships between the objects and graphically displaying those relationships, as taught in Ferrel.

Darnell, in view of Ferrel, fails to expressly disclose:

- finding at least one strongly connected component in the at least one graph; and
- publishing a set of objects ***belonging to a same strongly connected component group.***

Cormen teaches a method of performing a topological sort of an acyclic graph, comprising the step of:

- finding at least one strongly connected component in the at least one graph (see Pages 488-493).

for the purpose of converting a directed graph into an acyclic component graph (see Figure 23.9 on Page 489) so as to indicate precedence among the objects that comprise nodes of the graph (see Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for publishing objects, disclosed in Darnell, in view of Ferrel, to include the steps of:

- finding at least one strongly connected component in the at least one graph; and
- publishing a set of objects belonging to a same strongly connected component group,

for the purpose of converting a directed graph into an acyclic component graph so as to indicate precedence among the objects that comprise nodes of the graph, as taught by Cormen.

Claim 55:

Darnell, in view of Ferrel, fails to expressly disclose a method for publishing a plurality of objects, comprising the step of:

- topologically sorting at least part of the at least one graph.

Cormen teaches a method of performing a topological sort of an acyclic graph, comprising the step of:

- topologically sorting at least part of the at least one graph (see Page 485, fifth and sixth full paragraphs),

for the purpose of indicating precedence among the objects (see Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for publishing a plurality of objects, disclosed in Darnell, in view of Ferrel, to include the step of topologically sorting at least part of the at least one graph for the purpose of indicating precedence among the objects, as taught by Cormen.

Claim 56:

Darnell, in view of Ferrel, discloses a method for publishing a plurality of objects, comprising the steps of:

- examining objects in an order (in Darnell, the objects are “examined in an order” in that they are partitioned into groups, as discussed in the above rejection for Claim 16); and
- when an unpublished object is examined, publishing the unpublished object together with all objects (in Darnell, all the web pages can be updated at the same time; thus, “when an unpublished object is examined,” it is published together with all objects).

Darnell, in view of Ferrel, fails to expressly disclose a method for publishing a plurality of objects, comprising the step of:

- examining objects in an order ***defined by topological sorting***; and
- when an unpublished object is examined, publishing the unpublished object together with all objects ***belonging to a same strongly connected component***.

Cormen teaches a method of performing a topological sort of an acyclic graph, comprising the step of:

- examining objects in an order defined by topological sorting (see Page 485, fifth and sixth full paragraphs); and
- finding at least one strongly connected component in the at least one graph (see Pages 488-493), for the purpose of converting a directed graph into an acyclic component graph (see Figure 23.9 on Page 489) so as to indicate precedence among the objects that comprise nodes of the graph (see Page 485, fifth and sixth full paragraphs).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method for publishing objects, disclosed in Darnell, in view of Ferrel,, to include the steps of:

- examining objects in an order defined by topological sorting; and
- when an unpublished object is examined, publishing the unpublished object together with all objects belonging to a same strongly connected component, for the purpose of converting a directed graph into an acyclic component graph so as to indicate precedence among the objects that comprise nodes of the graph, as taught by Cormen.

Claims 57 and 58:

Darnell discloses a "consistency constraint" that includes "delaying publication of a first object until a second object is published" in that the two "objects" (i.e., web pages) are published together. Darnell also discloses first and second objects that are web pages.

Darnell fails to expressly disclose delaying publication of a first object until a second object *which is referenced by the first object, via a hyperlink*, is published. However, it was well-known by one of ordinary skill in the art at the time the invention was made to publish web pages in a certain order so that the first web page would not include a hyperlink to the second web page before the content on the second web page was updated. Webmasters did this so that all web pages for a website correspond and include the latest version of all components that comprise the web pages.

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method, disclosed in Darnell, in view of Ferrel, and further in view of Cormen, to include a consistency constraint that includes delaying publication of a first object until a second object which is referenced by the first object, via a hyperlink, is published so that the first web page would not include a hyperlink to the second web page before its content was updated.

Claim 59:

Darnell, in view of Ferrel, fails to expressly disclose an edge from a first object to a second object in at least one of the at least one graphs if the second object has a reference to the first object. However, this limitation is merely reciting an *inherent* characteristic of an acyclic directed graph.

As indicated in the above rejection for Claim 20, Ferrel teaches an acyclic graph that represents relationships between objects by edges between nodes. Any directed acyclic graph that includes a directed edge from a first node to a second node, if the second object includes a reference to the first object, will *inherently* have a directed edge between the two nodes.

Claim 60:

Darnell discloses a consistency constraint that includes publishing two compound objects together if the two compound objects are both constructed from at least one common changed fragment (see the above rejection for Claim 16).

Claims 75-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darnell, et al., Using Macromedia Dreamweaver 1.2 (Que Publishing – June, 1998), in view of Ferrel et al., U.S. Patent No. 6,199,082, and further in view of Cormen et al., "Introduction to Algorithms" ©1990, pp. 477-493.

Claims 75-81:

Claims 75-81 are merely computer software that performs the methods of Claims 53 and 55-60, respectively. Accordingly, Claims 75-81 are rejected using the same rationale indicated in the above rejections for Claims 53 and 55-60.

(10) Response to Argument

ANTICIPATION REJECTIONS

A. Anticipation Rejections for Claims 16, 17, 42 and 43

(1) *Arguments in Support of Claims 16 and 42*

(a) Arguments Based on Improper Claim Interpretation

Appellant argues that the examiner's anticipation analysis is based on an unreasonable parsing and interpretation of the claim language. In support of the argument, Appellant states that, when properly construed, the claimed "partitioning" step (e.g., see Claim 16, Line 3) relates to publishing objects for purposes of achieving consistency in the publication (emphasis in original text), rather than for purposes of updating web page objects, as disclosed in Darnell. See *Brief* – Page 12, last paragraph.

The examiner disagrees.

Firstly, it is noted that the feature upon which Appellant relies (i.e., "*partitioning*" for the purpose of achieving consistency in the publication) is NOT recited in the rejected claims. That is, Claims 16 and 42 do not mention "achieving consistency in the publication." Moreover, Claims 16 and 42 mention nothing about "consistency" or the purpose of the "publishing" step anywhere in the recited limitations. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Secondly, the Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364, 70 USPQ2d 1827 (Fed. Cir. 2004).

The relevant portions of the Specification are found at Page 11, Lines 9-20, which describes the problem that is addressed by the present application, and Page 13, Line 9 through Page 14, Line 17, which describes the process performed by the present invention.

The first cited portion of the Specification notes the importance of simultaneously publishing all web pages that are *affected by an edited object*, regardless of whether the web pages include the edited object on the page. The second cited portion of the

Specification notes the importance of determining the **proper order** in which the web pages that are affected by the edited object are **updated**.

Two important features of the present invention are: 1) determining **all** web pages that are **affected by an edited object**; and 2) determining the **proper order** (i.e., the proper **sequence**) in which the web pages affected by the edited object are **updated**.

The examiner notes that **neither** of these features is recited in Claims 16 and 42. Rather, Claims 16 and 42 simply recite:

- *partitioning at least some of the plurality of objects into a plurality of groups such that if two compound objects are constructed from at least one common changed fragment, then the compound objects are placed in a same group; and*
- *publishing all objects belonging to a same group together.*

Therefore, Claims 16 and 42 recite **no limiting relationship** between the “*partitioning*” step and the “*publishing*” step. Moreover, as clearly stated by Appellant, the present invention **decouples** the process of “*updating*” an object (i.e., “*partitioning*” objects) from the process of “*publishing*” an object. See *Brief* – Pages 13-14, spanning sentence.

The examiner notes Appellant’s statements of the examiner’s reasoning in determining that Darnell discloses the limitations of Claims 16 and 42 set forth in the *Final Rejection* dated 01/27/2005. See *Brief* – Page 13, first and second paragraphs.

The examiner observes that Appellant’s statements are accurate. However, the

examiner will monitor Appellant's future communications for consistency and will note for the record whenever Appellant deviates from the current statements.

Appellant argues that the "updating" methods in Darnell are distinct from, and unrelated to, the claimed "partitioning" step. In support of the argument, Appellant states that, in accordance with the present invention, the process of "*publishing*" an object is **decoupled** from the processes of *creating* or "*updating*" the object, and the process of *publishing* generally occurs after the object has been *created* or *updated* (emphasis added). Appellant then again states that the recited "partitioning" step is within the context of publishing objects for purposes of achieving consistency in the publication (emphasis in original text), rather than for purposes of updating web page objects, as disclosed in Darnell. See *Brief* – Page 13, third partial paragraph through Page 14, first full paragraph.

The examiner disagrees.

Firstly, in response to Appellant's statement that the present invention decouples the process of "creating" or "updating" the object from the process of "publishing" the object, the examiner notes that Darnell works exactly the same way, as explained in the following discussion.

Dreamweaver (i.e., the website maintenance tool disclosed in Darnell) allows the user to update/edit objects (i.e., the "parts" of web pages) included in the "web page parts" library and subsequently update all of the web pages of a website at once (i.e., an "atomic" update). During this "atomic" update of the web pages, *Dreamweaver*

searches through all of the web pages of the website and updates **only** those pages containing the edited “web page parts,” thereby “partitioning” the web pages into groups.

That is, for each edited “web page part,” *Dreamweaver* determines whether each web page of the website has the particular edited “web page part” and, depending upon that determination, *Dreamweaver* either updates the web page or it does not.

Accordingly, for each edited “web page part,” *Dreamweaver* either places each web page in the “updated” group (i.e., those web pages having the edited “web page part” and thus requiring an “update”) or the “not updated” group (i.e., those web pages not having the edited “web page part” and thus not requiring an “update”). Through this “update” process, *Dreamweaver* “partitions” the web pages into groups, as recited in Claims 16 and 42.

Subsequently, after updating all of the web pages having edited “web page parts,” *Dreamweaver* allows the user to send the website back to the web server. Thereby, *Dreamweaver* “[publishes] all objects belonging to a same group together” (emphasis added), as recited Claims 16 and 42.

Therefore, as clearly indicated in this analysis, *Dreamweaver*, like the present invention, **decouples** the process of “creating” or “updating” the object (i.e., web page) from the process of “publishing” the object.

Moreover, the examiner notes that Appellant, in the *Appeal Brief*, also observes that *Dreamweaver* **decouples** the process of “updating” objects from the process of “publishing” objects. See *Brief* – Page 13, second full paragraph, third sentence.

Secondly, in response to Appellant's statement that the recited "*partitioning*" step is within the context of publishing objects for purposes of achieving consistency in the publication rather than for purposes of updating web page objects, Claims 16 and 42 do **NOT** recite "*partitioning*" for the purpose of achieving consistency in the publication, and the rejected claims recite no limiting relationship between the "*partitioning*" step and the "*publishing*" step, as previously indicated.

Appellant argues that the examiner's contention that Darnell discloses the recited "*publishing*" step is merely conclusory and based on a self serving strained interpretation that is not supported by specific citation to the teachings of Darnell. Appellant also argues that, in the proper context of the claimed invention, a "group of objects" includes objects having *common changed fragments* rather than objects that have been updated, as disclosed in Darnell (emphasis in original text). Finally, Appellant again argues that the examiner ignores the purpose of the recited "*partitioning*" step (i.e., for achieving consistency in the publication). See *Brief – Page 14*, last partial paragraph through *Page 15*, first full paragraph.

The examiner disagrees.

Firstly, in response to Appellant's argument that that the examiner's contention that Darnell discloses the recited "*publishing*" step is merely conclusory and based on a self serving strained interpretation that is not supported by specific citation to the teachings of Darnell, the examiner notes that "[i]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference

but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

Darnell is essentially a user's guide for *Dreamweaver*, a tool for creating, editing and maintaining websites. The particular section of Darnell cited in the claim rejections pertains to editing the objects of web pages and updating the web pages that include those edited web page objects. One of ordinary skill in the art (i.e., a website creator/administrator who is familiar with *Dreamweaver*) at the time the invention was made would have surmised, upon a thorough and complete reading of the cited text in Darnell, that *Dreamweaver* allows the user to publish the updated web pages to a web server. Otherwise, *Dreamweaver* would be essentially useless. To sincerely believe that a user could edit web pages using *Dreamweaver* and **not** be able to send those edited web pages back to the web server (i.e., "publish" the edited web pages) is asinine.

Accordingly, at a minimum, Darnell impliedly discloses "publishing" the updated web pages that include the edited web page objects.

Secondly, in response to Appellant's argument that the recited invention includes objects having "*common changed fragments*" rather than objects that have been updated, the examiner observes that *Dreamweaver* allows the user to edit objects of web pages. These edited (i.e., "updated") web page objects **ARE** the "*common changed fragments*." For each edited web page object, *Dreamweaver* updates only those web pages having that particular edited web page object. Thus, the "updated"

web pages have "*common changed fragments.*"

Thirdly, in response to Appellant's argument that the examiner ignored the purpose of the recited "partitioning" step (i.e. for achieving consistency in the publication), Claims 16 and 42 do not recite "partitioning" for the purpose of achieving consistency in the publication, and the rejected claims recite no limiting relationship between the "partitioning" step and the "publishing" step, as previously indicated in the *Response to Argument*.

(b) Arguments Based on Non-support of Inherency

Appellant argues that the examiner has offered no evidence or basis-in-fact to support the purported "inherent" teachings of Darnell and that the examiner has offered no legally sufficient rationale or technical reasoning to support the anticipation rejection based on inherency. Appellant supports the argument by stating that the update process disclosed in Darnell involves "searching through the pages on the web site for library items and updating any library items that are found using the current contents from the library" and observing that this process can be implemented in many ways. For example, Appellant argues, the update process can sequentially select each page (in any order), determine if the page has library items to be updated, and then update the library items for that page as needed, and repeat this process for all pages. In such instance, Appellant argues, there is no need to group the objects having common changed fragments. Also, Appellant argues, the examiner has not explained why this is

the only manner in which the update process can be performed. See *Brief* – Page 15, last partial paragraph through Page 17.

The examiner disagrees.

The relevant claim language reads:

- *partitioning at least some of the plurality of objects into a plurality of groups such that if two compound objects are constructed from at least one common changed fragment, then the compound objects are placed in a same group*
(see Claim 16, Lines 3-5).

Appellant appears to contend that, as *Dreamweaver* performs the update process, *Dreamweaver* may select the web pages that are updated in a myriad of ways. Even if Appellant's contention is correct, the update process of Darnell still inherently discloses the recited "*partitioning*" step, as explained in the following discussion.

As previously indicated, *Dreamweaver* allows the user to edit objects (i.e., the "parts" of web pages) included in the "web page parts" library and subsequently update all of the web pages of a website at once (i.e., an "atomic" update). During this "atomic" update of the web pages, *Dreamweaver* searches through all of the web pages of the website and updates **only** those pages containing the edited "web page parts," thereby "*partitioning*" the web pages into groups.

That is, for each edited "web page part," *Dreamweaver* determines whether each web page of the website has the particular edited "web page part" (i.e., "*common changed fragment*") and, depending upon that determination, *Dreamweaver* either updates the update the web page or it does not. Accordingly, for each edited "web

page part," *Dreamweaver* either places each web page in the "updated" group (i.e., those web pages having the edited "web page part," or the "*common changed fragment*") or the "not updated" group (i.e., those web pages not having the edited "web page part," or the "*common changed fragment*").

By determining whether each web page includes the particular edited "web page part" and by either updating the web page or not updating the web page based upon that determination, *Dreamweaver* "[partitions] at least some of the plurality of objects into a plurality of groups such that if two compound objects are constructed from at least one common changed fragment, then the compound objects are placed in a same group." Stated differently, at the conclusion of the "update" process, *Dreamweaver* has "partitioned" the web pages into groups, as recited in Claims 16 and 42.

Therefore, whether *Dreamweaver* sequentially selects each web page separately (in any order) for the purpose of updating the web pages or whether *Dreamweaver* updates all of the web pages at once, the end result is that *Dreamweaver* has inherently "partitioned" the web pages into groups by determining whether each web page includes a particular edited "web page part" and by either updating the web page or not updating the web page based upon that determination.

The examiner contends that the above discussion provides a legally sufficient rationale and/or technical reasoning to support the anticipation rejection based on inherency.

(2) *Arguments in Support of Claims 17 and 43*

Appellant's arguments in support of Claims 17 and 43 rely upon the arguments in support of Claims 16 and 42.

The examiner disagrees, as indicated in the above discussion.

OBVIOUSNESS REJECTIONS

B. Obviousness Rejections for Claims 18, 19, 44 and 45

Appellant's arguments in support of Claims 18, 19, 44 and 45 rely upon the arguments in support of Claims 16 and 42.

The examiner disagrees, as indicated in the above discussion.

C. Obviousness Rejections for Claims 20-22 and 46-48

Appellant's arguments in support of Claims 18, 19, 44 and 45 rely upon the arguments in support of Claims 16 and 42.

The examiner disagrees, as indicated in the above discussion.

D. Obviousness Rejections for Claims 23-26, 49-53, 55-60 and 75-81

Appellant's arguments in support of Claims 23-26 and 49-53 rely upon the arguments in support of Claim 16.

The examiner disagrees, as indicated in the above discussion.

(1) *Arguments in Support of Claims 53 and 75*

Appellant argues that the combination of Darnell, Ferrel and Cormen does not teach or suggest the recited invention of Claim 53. In support of the argument, Appellant states that the examiner's reliance on Darnell is irrelevant given that Darnell does not disclose the claimed step of "constructing" a graph. Appellant argues further that there is no suggestion in either Darnell or Ferrel of a method for publishing objects in which a graph is constructed with at least some of the edges being derived from at least one consistency constraint (emphasis in original text) because Darnell does not disclose a method for publishing, much less a method for publishing objects based on consistency constraints. Appellant further supports the argument by asserting that there is no basis for the examiner's conclusion that Ferrel teaches a graph having nodes and edges, wherein at least some of the edges being derived from at least one consistency constraint (emphasis in original text) because, although acyclic graphs may be known to have ordered (directed) edges, that is not the same as edges derived from consistency constraints (emphasis in original text). See *Brief* – Page 20, first full paragraph through

Page 22, first full paragraph.

The examiner disagrees.

In response to Appellant's argument that Darnell fails to disclose the claimed step of "constructing" a graph, the examiner notes that Darnell was not relied upon to teach the claimed "constructing" step. Rather, Ferrel teaches the claimed "constructing" step. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to Appellant's argument that there is no suggestion in either Darnell or Ferrel of a method for publishing objects in which a graph is constructed with at least some of the edges being derived from at least one consistency constraint because:

1. Darnell does not disclose a method for publishing, and
2. Darnell does not disclose a method for publishing objects based on consistency constraints,

the examiner responds to both reasons supporting Appellant's argument in the following text.

Firstly, Darnell is essentially a user's guide for *Dreamweaver*, a tool for creating, editing and maintaining websites. The particular section of Darnell cited in the claim rejections pertains to editing the objects of web pages and updating the web pages that include those edited web page objects. One of ordinary skill in the art (i.e., a website

administrator who works with *Dreamweaver*) at the time the invention was made would have surmised, upon a thorough and complete reading of the cited text in Darnell, that *Dreamweaver* allows the user to publish the updated web pages to a web server. Otherwise, *Dreamweaver* would be essentially useless.

Accordingly, at a minimum, Darnell impliedly discloses “publishing” the updated web pages that include the edited web page objects.

Secondly, the examiner notes that Claims 53 and 75 do NOT recite a method for *publishing objects based on consistency constraints*. Rather, the claims recite:

- *finding at least one strongly connected component in the at least one graph; and*
- *publishing a set of objects belonging to a same strongly connected component group* (see Claim 53, Lines 7-8).

There is no mention in the rejected claims of publishing web pages based on consistency constraints. Although the claims recite constructing a graph having “edges” derived from a “consistency constraint,” the claims do not recite using the “consistency constraint” when publishing the web pages.

In response to Appellant’s argument that Ferrel fails to teach a graph having nodes and edges, wherein at least some of the edges being derived from at least one consistency constraint, because the edges in acyclic graphs are different from edges derived from “consistency constraints,” the examiner notes that Appellant fails to explain how or why the “consistency constraint” edges are **different from** the “acyclic graph” edges and fails to support the assertion with analysis or evidence.

The examiner notes that the phrase “*consistency constraint*” reads broadly. In the Specification of the present invention, “*consistency constraints*” used for publishing web pages include the following:

- 1) A newly updated Web page should not contain hypertext links to older pages which have not been updated yet.
- 2) A newly updated Web page should not contain hypertext links to pages which have not been created yet.
- 3) In many cases, a Web site should not have some of the pages reflecting current information while other pages reflect older information. Instead, it is desirable to publish all updated pages containing current information in one atomic action.

See Specification – Page 1, Lines 17 through Page 2, Line 7. The examiner cannot find any further definition of the phrase “*consistency constraint*” in the Specification.

During patent examination, the pending claims must be “given their broadest reasonable interpretation consistent with the specification.” *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Of the above definitions, “*consistency constraint*” is most broadly defined in the third definition.

That definition explicitly states that any publication of updated web pages should occur in one atomic action. This implies that any relationship or order that applies to the objects making up the web pages will be used during publication of the web pages. Thus, in view of the Specification, the broadest reasonable interpretation of the phrase “*consistency constraint*” is any relationship or order that is imposed upon objects of web pages that will affect the publication of said web pages.

Ferrel discloses a multimedia publishing system that ***publishes web pages*** comprising various **objects**. Ferrel expressly states, "The natural way of storing ***related*** and ***ordered objects*** is in a data structure, such as an acyclic graph" (emphasis added). See Ferrel – Column 9, Lines 30-31. Thus, Ferrel discloses that objects of web pages may be placed into an acyclic graph, where the relationships and order of said objects are maintained. These relationships and order of the web page objects impose a "*consistency constraint*" on any **update** of the web pages comprising the objects in that the acyclic graph will be consulted to determine ***how*** ("relationships") to update the objects and ***when*** ("order") to update the objects.

Moreover, "edges" of an "acyclic graph" ***inherently*** are derived from a "*consistency constraint*" in that, when a graph is topologically sorted, the "topological sort" follows the edges and automatically imposes "*consistency constraints*." This is ***how*** a "topological sort" is done. For example, a topological sort of an acyclic graph results in an ordering of its nodes along a horizontal line so that all directed edges go in one direction. The disputed claim language, as it currently reads, simply describes in more detail the acyclic graph expressly disclosed in Ferrel. That is, there is **no** difference in the "*consistency constraint*" edges and the "acyclic graph" edges. Stated differently, the "*consistency constraint*" edges in the present invention **are** "acyclic graph" edges.

Accordingly, Ferrel teaches a graph having nodes and edges, wherein **at least some of the edges being derived from at least one consistency constraint**.

(11) Related Proceedings Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/James H. Blackwell/ 11/25/2008

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